

**Aviation Safety Investigation Report
198903770**

Beech 76

27 April 1989

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 198903770
Location: Archerfield QLD
Date: 27 April 1989
Highest Injury Level: Nil
Injuries:

Occurrence Type: Accident

Time: 1445

	Fatal	Serious	Minor	None
Crew	0	0	2	2
Ground	0	0	0	-
Passenger	0	0	0	0
Total	0	0	0	2

Aircraft Details: Beech 76
Registration: VH-JKE
Serial Number: ME-171
Operation Type: Aerial Work
Damage Level: Substantial
Departure Point: Coolangatta QLD
Departure Time: 1330
Destination: Coolangatta QLD

Approved for Release: 28th February 1990

Circumstances:

The aircraft had been involved in asymmetric training and the landing gear had been cycled two or three times during the flight. On the final down selection, a green light was obtained for the mainwheels but not for the nosewheel. The landing gear was recycled with the same result. Emergency landing gear extension was carried out, again with the same result. The aircraft was landed with the nosewheel in the retracted position. Inspection of the nose landing gear system revealed that the forward pivot arms of the door operating mechanism had moved through the over-centre position. This condition, about which there is a warning in the Beech 76 Maintenance Manual, will cause the nose landing gear not to extend. Damage inside the nosewheel well indicated that, during the last retraction cycle, the landing gear drag brace pin became positioned outside the slot in the door actuating fork, forcing the the forward pivot arms into the over-centre position. No fault was found with the rigging of the of the nosegear/door mechanism and extension/retraction of the landing gear was normal, apart from some stiffness in the nosegear door hinges. The fault could be duplicated during ground tests by applying side loads, such as might have occurred during unbalanced flight, to the nose landing gear doors. The stiffness in the door hinges might also have been of significance. In 1983 Beechcraft issued Service Instruction 1209 to reduce the possibility of binding in the door hinges or the landing gear linkage which could prevent nose landing gear extension. The records of VH-JKE indicated that the instruction had not been carried out.

Significant Factors:

The following factors were considered relevant to the development of the accident

1. Malfunction of the nosegear assembly may have been caused by aerodynamic side-loads on the nose landing gear doors, stiffness in the door hinges, or a combination of these influences.

2. The nose landing gear could not be extended.